Revised Draft
ANALYSIS OF BROWNFIELD CLEANUP ALTERNATIVES

Former Ingersoll Property
300 S. Water Street
(Ward Pump and W.F. and John Barnes)

Brownfields Revolving Loan Funds Grant

BF-00E45801-4

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1.0 INTRODUCTION

The former Ingersoll property, formerly Ward Pump and W.F and John Barnes, is located at 300 South Water Street with the west boundary of the property being the Rock River, the east and south boundaries being Union Pacific Rail lines and the north boundary being Walnut Street. The city of Rockford is located in Winnebago County, Illinois with major routes of transportation including Interstates 39 and 90, along with Route 20. Rockford has a population of approximately 152,000 residents according to the most recent Census and is the largest community in Winnebago County.

This Analysis of Brownfield Cleanup Alternatives (ABCA) is provided to outline the three (3) alternatives evaluated at this second stage of the cleanup planning process for the former Ingersoll property. The first stage of the Cleanup process was funded by Brownfields Cleanup Grant BF- 00E00320. It was to include cleanup of the petroleum free-product under the north wing of the main structure as well as asbestos removal from all structures on site. Supplemental soil testing revealed the need to cleanup three contaminated soil "hot spots", so the asbestos removal was not included in the Cleanup Grant activities. A draft NFR letter was received for the Ingersoll site that documented that the existing hard surfaces and the existing clean fill cover constituted an Engineered Barrier. However, the Illinois Water Survey and FEMA have determined that the elevation of the site must be raised to 12 inches above the 100 year flood level for it to be a buildable site, so the elevation of the engineered barrier must be raised 21 inches.

The second stage of Cleanup for the Ingersoll site, to be funded primarily with USEPA RLF (CA BF-00E45801-4) will include two major components: 1) the asbestos removal and 2) the restoration of the Engineered Barrier.

2.0 SITE BACKGROUND

The Ingersoll site had been purchased by the City of Rockford during 2002 with the intent of converting this site for a future public use with Riverfront Access. The environmental assessment and cleanup of the Ingersoll site began in 2006 and the initial Phase II ESA work was completed prior to the Cleanup Grant Application submittal during the fall of 2008. The Cleanup Grant Cooperative Agreement was received during January of 2010. While the petroleum free product removal process testing was underway, additional soil testing by IEPA revealed that there were three hot spots requiring soil removal and clean backfill. Once these soil cleanups and petroleum free product recovery were complete, the remaining funds were used to prepare the remedial action completion report (RACR) and prepare draft asbestos bid specs. Following the approval of the RACR, the Draft NFR was received This Draft NFR letter approved the proposed establishment of the Engineered Barrier to eliminate soil and groundwater exposure routes to persons using the site through a combination of existing floor slabs and paved areas and, to a lesser extent, areas where at least three feet of clean fill was in place. The area where the Engineered Barrier was established is the entire area located west of South Water Street (vacated).

As of the summer of 2013, the City had received funding for an $18 million Indoor Sports Facility that would reuse 2/3rds of the existing buildings .The City has since learned that the

Illinois Water Survey, working on behalf of FEMA, has determined that the Ingersoll site west of vacated South Water Street is located within the 100 year floodplain. This portion of the site is required to be raised in elevation a total of 21 inches in order to reuse the existing structures or to build new. In addition, this increase in elevation must be done in a way to reestablish the Engineered Barrier.

3.0 CONTAMINANTS AND EXPOSURE ROUTES

Contaminants of concern in the soil include PCB's, VOC's, SVOC's and Inorganics. The exposure routes for one or more of the aforementioned contaminants include the Soil Component of the Groundwater Ingestion Exposure Route, the Soil Inhalation Exposure Route, and the Soil Ingestion Exposure Route as determined in the Comprehensive Site Investigation Report. The Engineered Barrier that is now in place following the Cleanup Actions under Cleanup Grant BF-00E00320 was sufficient to receive the Draft NFR letter from IEPA. However, now that the Illinois Water Survey/FEMA has determined that the western portion of the site must be raised 21 inches to be useable, the City is limited to three Brownfield Cleanup Alternatives

4.0 CLEANUP ALTERNATIVES

There are three cleanup alternatives applicable to the former Ingersoll property that could be used at this site to address the soil and groundwater contamination and the Engineered Barrier Issue. These alternatives include:

4.1 Alternative 1 – No Action

The City does not address the 100 year floodplain and engineered barrier in any way at the site.

1. Effectiveness – this alternative does not address the remaining contamination in any manner and, therefore, is not effective.

2. Implementability – implementing this alternative takes no effort on the part of the City, but results in the existing buildings not being able to be reused and the site not being able to be used.

3. Cost – there is no cost for inactivity except for the fact that the City made a large investment when it purchased the property in 2002 and this investment cannot be recovered in any way under this alternative.

4.2 Alternative 2: Reestablish the Engineered Barrier at 21 inches above its current elevation through a combination of clean fill and concrete/ hard surface layers totaling 21 inches.

1. Effectiveness – This alternative is a very effective way of cutting off the exposure route to impacted soils below the building. Because the barrier also needs to conform to flood plain regulations it has to be raised up which will illuminate the Soil Ingestion Exposure Route and Soil Inhalation Exposure Route.

2. Implementability – The implementability of this alternative is logical in concept and can be accomplished with conventional equipment. None of the existing engineered barrier would be removed. It would simply be added onto with at least two layers of material and one impervious surface layer. In more detail, the north wing of the building, which covers 77,000 square feet, would be modified with the raising the elevation of the floor slab by a total of 21inches through a combination of clean fill and a new floor slab. The southern wing of the building would be demolished with the floor slab left intact. This floor slab would be covered with clean fill and a new floor slab and other impervious surfaces to be used for the Championship Court and public use areas. The area adjacent to the Rock River would receive an improved sea wall and be brought to an elevation above the 100 year flood plain level. It will serve to continue to contain the remaining petroleum free product the engineered barrier would be completed and

an impervious surface or a minimum of three feet of clean material would cover the site thus reestablishing the Engineered Barrier.

3. Cost – The cost to reestablish the engineered barrier is estimated as follows:

Raising the Floor Level of the North Wing by

A Combination of Clean Fill and a New Floor Slab	$ 511,337
Championship Court Fill, Foundations and Floor Slab	$ 309,537
South Site Encapsulation (fill, hard surfaces)	$ 205,586
TOTAL	$1,026,460.00

4.3 Alternative 3 –Excavation of all Hazardous Substances and Petroleum free product to achieve an NFR letter Without an Engineered Barrier

1. Effectiveness – This alternative would be effective only if this site were to be used for open space/ park and not for an Indoor Sports facility or other similar use with the repurposing of the 77,000 square foot industrial building (the north wing).

2. Implementability- The implementation of this alternative is feasible only if the Indoor Sports facility or similar project does not take place and this is more cost effective than reestablishing the engineered barrier following the removal of all of the structures. It is highly unlikely that this alternative would be more cost effective than Alternative 2 because of the unknown extent of the required soil excavations and petroleum free product recovery. This alternative could be further complicated by the considerable amount of debris that is expected to remain under the floor slabs of both the south wing (demolition of Ward Pump prior to 1942 and the north wing (demolition of WF and John Barnes building prior to 1968.

3. Cost- This alternative could easily cost more than one million dollars and the end result would be a vacant site rather than an Indoor Sports Center.

5.0 RECOMMENDATION

Based on the analysis presented in the previous section, the second alternative addresses the contamination, but is also compatible with the proposed end use and is more cost-effective. Therefore, the second alternative is recommended.

6.0 DECISION DOCUMENT

A decision document will be issued at the close of the 30-day public comment period with additional details on the selected alternative.

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